U.S. Application No.: 10/552,826

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (currently amended): A woven or knitted fabric containing yarns (1) having a high-

water-absorbing and self-elongating property and yarns (2) having a low water-absorbing and

self-elongating property,

wherein

(1) when the high water-absorbing and self-elongating yarns (1) and the low water-

absorbing and self-elongating yarns (2) are respectively subjected to a measurement of self-

elongating on absorbing water in such a manner that each of the yarns is wound 10 times around

a reel for hank having a circumference of 1.125m long under a load of 0.88 mN/dtex to form a

hank; the hank is removed from the reel and left to stand in the air atmosphere having a

temperature at 20C and a relative humidity at 65% for 24 hours to dry the hank; then the length

(Ld, mm) of the dry hank is measured under a load of 1.76 mN/dtex when the varn is a non-

elastic varn having an elongation at break of 200% or less, or under a load of 0.0088 mN/dtex

when the yarn is an elastic yarn having an elongation at break higher than 200%; the hank is

immersed in water at a temperature at 20°C for 5 minutes; then the hank is taken out from water:

a length (Lw. mm) of the wet hank is measured under the same load as described above in

response to the elongation at break of the hank; and the self-elongation of each yarn is calculated

in accordance with the following equation:

U.S. Application No.: 10/552,826

Self-elongation of yarn (%) [(Lw-Ld)/(Ld)] x 100

one (1) of the two type of yarns is a high water-absorbing, self-elongating yarn having a

mean self-elongation of +5% or more and the other (2) is a low water-absorbing, self-elongating

varn having a mean self-elongation lower than +5%:

(2) the high water-absorbing, self-elongating yarns (1) are constituted from polyetherester

fibers formed from polyehterester elastomer comprising hard segments comprising polybutylene

terephthalate blocks and soft segments comprising polyoxyethylene glycol blocks having a

number average molecular weight of 1,000 to 6,000; and the ratio by mass of the hard segments

to the soft segments in the polyetherester elastomer is in the range of from 30/70 to 70/30; and

(3) when a test piece is prepared from the fabric in such a manner that the fabric is

stabilized in dimension in the atmosphere having a temperature at 20°C and a relative humidity

at 65% and then cut into pieces of 30 cm long in the warp or wale direction and 30 cm long in

the weft or course direction; and the high water-absorbing and self-elongating yarns (1) and the

low water-absorbing and self-elongating yarns (2) and respectively contained in the test pieces

satisfy the following requirement:

 $A/B \le 0.9$ 

wherein A represents a mean length of the high water-absorbent and self-elongative

yarns (1) and B represents a mean length of the low water-absorbing and self-elongating yarns

(2), the yarns (1) and (2) being arranged in the same direction as each other in the test piece and

picked up from the test piece; the length of the respective yarn being measured under a load of

1.76 mN/dtex when the yarn is a non-elastic yarn having an elongation at break of 200% or less

U.S. Application No.: 10/552,826

or under a load of 0.0088 mN/dtex when the yarn is an elastic yarn having an elongation at break higher than 200%, and whereby the air-permeability of said fabric increases when wetted

with water

two-types of yarns different from each other in a self-elongating property upon absorbing water-wherein, when a test-piece is prepared from the fabric in such a manner that said woven or knitted fabric is stabilized in dimension in the atmosphere having a temperature at 20°C and a relative humidity at 65% and then cut into pieces of 30 cm long in the warp or wale direction and 30 cm long in the west or course direction; and yarns (1) having a high water absorbing and self-elongating property and yarns (2) having a low water absorbing and self-elongating property and respectively contained in the test-pieces satisfy the following requirements:

 $A/B \le 0.9$ 

wherein A represents a mean length of the yarns (1) having high water-absorbent and selfelongative property and B represents a mean length of said yarns (2) having low water-absorbing and self-elongating property, the yarns (1) and (2) being arranged in the same direction as each other in the test piece and picked up from the test-piece; the length of the respective yarn being measured under a load of 1.76 mN/dtex when the yarn is a non-elastic yarn having an elongation at break of 200% or less or under a load of 0.0088 mN/dtex when the yarn is an elastic yarn having an elongation at break higher than 200%, and whereby the air-permeability of said fabric increases when wetted with water; and the yarns (1) having a high water absorbing, self elongating property are constituted from polyetherester fibers formed from polyetherester elastomer comprising hard segments comprising polybutylene terephthalate blocks and soft

U.S. Application No.: 10/552,826

segments comprising polyoxyethylene glycol blocks having a number average molecular weight

of 1,000 to 6,000; and the ratio by mass of the hard segments to the soft segments in the

polyetherester elastomer is in the range of from 30/70 to 70/30.

2. (canceled).

3. (currently amended): The woven or knitted fabric containing two different types of

varns as defined by claim 23, wherein the difference (E<sub>(1)</sub> - E<sub>(2)</sub>) between the self-elongation

(E(1)) upon absorbing water of the yarn (1) and the self-elongation (E(2)) upon absorbing water of

the varn (2) is in a range of from 5 to 40%.

4. (previously presented): The woven or knitted fabric containing two different types of

yarns as defined by claim 1, having a knitted fabric structure, in which the yarns (1) and (2) are

combined in parallel with each other, and the combined varns form composite varn loops in the

fabric.

5. (previously presented): The woven or knitted fabric containing two different types of

yarns as defined by claim 1, having a woven fabric structure in which the yarns (1) and (2) are

combined in parallel with each other, and the combined yarns form at least one of warps and

wefts of the woven fabric.

U.S. Application No.: 10/552,826

6. (previously presented): The woven or knitted fabric containing two different types of

yarns as defined by claim 1, wherein composite yarns or paralleled yarns formed from the two

types of yarns (1) and (2), and the yarn (2) are arranged alternately with every at least one yarn in

at least one direction selected from the warp and weft directions of the woven fabric structure or

in at least one direction selected from the wale and course directions in the knitted fabric

structure.

7. (previously presented): The woven or knitted fabric containing two different types of

yarns as defined by claim 1, wherein at least one of the yarns (1) is combined with at least one of

the yarns (2) to form a composite yarn.

8. (canceled).

9. (previously presented): A woven or knitted fabric containing two different types of

yarns as defined by claim 1, wherein fibers from which the yarn (2) having a low water-

absorbing and self-elongating property is constituted, are selected from polyester fibers.

10. (previously presented): A woven or knitted fabric containing two different types of

yarns as defined by claim 1 wherein, when the fabric is subjected to a measurement of change in

opening area of the fabric in such a manner that a plurality of test pieces of the woven or knitted

fabric are left to stand in the air atmosphere having a temperature at 20°C and a relative humidity

at 65% for 24 hours to prepare a plurality of dry test pieces and, separately, a plurality of other

test pieces of said woven or knitted fabric are immersed in water at a temperature at 20°C for 5

minutes, then taken out from water, and sandwiched between a pair of filter papers under the

pressure of 490 N/m<sup>2</sup> for one minute to remove water existing in the interstices between fibers in

the test pieces to prepare a plurality of wet test pieces, surfaces of each of the dry and wet test

pieces are observed by an optical microscope at a magnification of 20 and the opening areas of

the dry and wetted test pieces are calculated in accordance with the following equation:

Opening area (%) =

[(total area of openings between yarns)/

(observed area)] × 100

then, a mean value of the measured opening areas of each of the dry and wetted test

pieces are calculated and a change between the mean opening area of the wetted test pieces and

the mean opening area of the dry test pieces was calculated in accordance with the following

equation:

Change in opening area (%) =

[(mean opening area of wetted test pieces) - (mean opening area of dry test

pieces)]/(mean opening area of dry test pieces) × 100,

the resultant change in the opening area is at least 10%.

11. (previously presented): A woven or knitted fabric containing two different types of

yarns as defined by claim 1 wherein, when a plurality of test pieces of the woven or knitted

fabric are left to stand in the air atmosphere having a temperature of 20°C and a relative humidity of 65% for 24 hours to prepare a plurality of dry test pieces and, separately, a plurality of other test pieces of the woven or knitted fabric are immersed in water at a temperature of 20°C for 5 minutes, taken out from water, and sandwiched between a pair of filter papers under the pressure of 490 N/m² for one minute to remove water existing in the interstices between fibers in the test piece to prepare a plurality of wet test pieces, air-permeabilities of the dry and wetted test pieces are measured in accordance with JIS L 1096-1998, 6.27.1, Method A (Frazir type method), and a mean air-permeability of the dry test pieces and a mean air-permeability of the wet test pieces are calculated from the measurement data, and the change in air-permeability is calculated in accordance to the following equation:

Change in air-permeability =

[(mean air-permeability of wetted test pieces) - (mean air-permeability of dry test pieces)]/(mean air-permeability of dry test pieces)  $\times$  100.

the resultant change in air-permeability is 30% or more.

12. (previously presented): A woven or knitted fabric containing two different types of yarns as defined by claim 1, having a change in roughness of at least 5%; determined in such a manner that a plurality of test pieces of the woven or knitted fabric are left to stand in the air atmosphere at a temperature of 20°C at a relative humidity of 65% for 24 hours to prepare a plurality of dry test pieces and, separately, a plurality of other test pieces of the woven or knitted fabric are immersed in water at a temperature of 20°C for 5 minutes, are taken out from water.

Attorney Docket No.: Q90673

AMENDMENT UNDER 37 C.F.R. § 1.114(c) U.S. Application No.: 10/552.826

and then are sandwiched between a pair of filter papers under the pressure of 490 N/m<sup>2</sup> for one minute to remove water existing in the interstices between fibers in the test pieces to prepare a plurality of wet test pieces, thickness (H1) of convexities and thickness (H2) of concavities formed in the woven or knitted fabric structure of each dry and wetted test pieces are measured, a roughness of each of the dry and wetted test pieces is calculated in accordance with the following equation:

Roughness (%) =

(thickness H1 of convexities) - (thickness H2 of concave portion)/(thickness H2 of concavities)  $\times$  100

wherein the thickness H1 of the convexities is a mean thickness of a convexities having an area of 1 mm  $\times$  1 mm and the thickness H2 of the concavities is a mean thickness of the concavities having an area of 1 mm  $\times$  1 mm and located in an approximately center part between two convexities adjacent to the concavities in the warp or course direction thereof, and the change in roughness is calculated in accordance with the following equation:

Change in roughness =

[(roughness of wetted test piece) - (roughness of dry test piece)]/100.

13. (previously presented): A woven or knitted fabric containing two different types of yarns as defined by claim 1, having a woven fabric structure in which structure a warp yarn group W<sub>(2)</sub> consisting of a plurality of warp yarns, each formed solely from the yarns (2) having a low water-absorbing, self-elongating property and a warp yarn group (W<sub>(1+2)</sub>) consisting of a

.114(c) Attorney Docket No.: O90673

AMENDMENT UNDER 37 C.F.R. § 1.114(c) U.S. Application No.: 10/552,826

plurality of warp yarns, each formed of a composite yarn or a paralleled yarn formed from the yarns (1) having a high water-absorbing, self-elongating property and the yarns (2) having a low water-absorbing, self-elongating property, are alternately arranged with each other and the warp yarn groups intersect a weft yarn group  $F_{(2)}$  consisting of a plurality of weft yarns, each formed solely from the yarns (2) having a low water-absorbing, self-elongating property, and a weft yarn group  $(F_{(1+2)})$  consisting of a plurality of weft yarns, each formed from composite yarns formed from the yarns (1) having a high water-absorbing, self-elongating property and the yarns (2) having a low water-absorbing, self-elongating property, whereby a plurality of regions having a high water-absorbing and self-elongating property and formed by the intersection of the warp group  $(W_{(1+2)})$  and the weft group  $(F_{(1+2)})$ , are arranged with spaces from each other both in the warp and weft directions, in the form of islands in sea.

14. (previously presented): A woven or knitted fabric containing two different types of yarns as defined by claim 1, having a double knitted structure comprising a cylinder side knitted layer and a dial side knitted layer tucked from either one of said layers to the other, wherein the cylinder side knitted layer is formed from the yarns (2) having a low water-absorbing, self-elongating property, and in the dial side knitted layer, regions composed solely of the yarns (2) having a low water-absorbing, self-elongating property and regions composed of composite yarns, each formed of the yarn (1) having a high water-absorbing, self-elongating property and the said yarn (2) having a low water-absorbing, self-elongating property, are arranged alternately with each other in the course direction and/or the wale direction.

Attorney Docket No.: Q90673

AMENDMENT UNDER 37 C.F.R. § 1.114(c) U.S. Application No.: 10/552,826

15. (previously presented): A woven or knitted fabric, containing two different types of

yarns as defined by claim 1, having a triply knitted structure comprising a cylinder side knitted

layer, a dial side knitted layer and an intermediate knitted layer disposed between the above-

mentioned two layers; either one of the intermediate layer and the cylinder side knitted layer or

the dial side knitted layer being tucked from the other, wherein the intermediate knitted layer is

formed solely of the yarns (2) having a low water-absorbing, self-elongating property, and in

each of said dial side and cylinder side knitted layers, regions composed solely of the varns (2)

having a low water-absorbing, self-elongating property and regions composed of composite

varns, each formed of the varn (1) having a high water-absorbing, self-elongating property and

the varn (2) having a low water-absorbing, self-elongating property, are alternately arranged with

each other in the course direction and/or the wale direction.

16. (previously presented): A woven or knitted fabric containing two different types of

yarns as defined by claim 1, having a knitted fabric structure formed from of the two types of

varns (1) and (2), wherein the knitted fabric structure has a yarn density satisfying the following

equation:

 $Co \times We \ge 2.000$ 

wherein Co represents the number of courses per 2.54 cm in the transverse direction of said

knitted fabric, and We represent the number of wales per 2.54 cm in the longitudinal direction of

said knitted fabric.

AMENDMENT UNDER 37 C.F.R. § 1.114(c) Attorney Docket No.: Q90673 U.S. Application No.: 10/552,826

17. (canceled).

18. (previously presented): A woven or knitted fabric, containing two different types of yarns as defined by claim 1, having an air-permeability of 50 ml/cm<sup>2</sup>.sec or less, determined in accordance with JIS L 1096-1998, 6.27.1, Method A (Frazir type method), in the air atmosphere

having a temperature of 20°C and a relative humidity of 65%.

19. (previously presented): A woven or knitted fabric, containing two different types of yarns as defined by claim 1, having a woven fabric structure in which one of warp and weft of the fabric is formed from composite or paralleled yarns, each formed from at least one yarn having a high water-absorbing, self-elongating property and at least one yarn having a low water-absorbing, self-elongating property, and the other one of warp and weft is formed from the yarns having a low water-absorbing, self-elongating property, and further exhibiting a cover factor CF in the range of from 1,800 to 2,800, determined in accordance with the following equation:

$$CF = (DWp/1.1)^{1/2}xMWp + (DWf/1.1)^{1/2}xMWf$$

wherein DWp represents a total yarn thickness (dtex) of the warp yarns, MWP represents a weaving density (yarns/3.79 cm) of the warp yarns, DWf represents a total yarn thickness (dtex) of the weft yarns, and MWf represents a weaving density (yarns/3.79 cm) of the weft yarns.

Attorney Docket No.: Q90673

AMENDMENT UNDER 37 C.F.R. § 1.114(c) U.S. Application No.: 10/552,826

20. (original): A woven or knitted fabric containing two different types of yarns as

defined by claim 19, wherein the composite yarn comprises a core portion formed from at least

one varn having a high water-absorbing, self-elongating property and a sheath portion

surrounding the core portion and formed from a plurality of yarns having a low water-absorbing,

self-elongating property.

21. (previously presented): Clothing comprising the woven or knitted fabric containing

two different types of yarns as defined by claim 1, and capable of increasing the air-permeability

thereof upon absorbing water.

22. (original): Clothing as defined by claim 21, wherein at least one portion of said

clothing selected from an armhole, a side, a bust, a back and a shoulder is formed from the

woven or knitted fabric containing two different varns.

23. (original): Clothing as defined by claim 21, selected from underwear.

24. (original): Clothing as defined by claim 21, selected from sportswear.